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Many programs for gifted children are being developed which focus on individual learning needs, establish differential techniques, describe heightened goals of achievement, and emphasize personal development toward excellence. Increased enrollment for gifted child programs was noted during the past year. The most frequently used types of programs were enrichment in the regular classroom, special classes, advanced classes, acceleration, special counseling, and instruction outside the regular classroom. Most elementary school gifted children are in programs involving enrichment of the regular curriculum, and most high school students are in special classes. Any program for gifted students should involve consideration of two dimensions -- sequence or planning of the total curriculum development, and scope or exploration in depth of all aspects of the curriculum.

Four types of educational programs for gifted pupils will be demonstrated in California during the next three years. All are predicated upon a belief in individual differences; the development of adequate case study techniques will form the foundation for curriculum planning and development. The enrichment demonstration will focus on scientific investigation, critical appreciation, and creative expression in the elementary schools. The acceleration demonstration offers acceleration without grade-skipping. The pupil is chosen on the basis of general maturity as well as giftedness and takes part in a summer session after the second grade. An enriched third grade program is offered, and, during his subsequent fourth and fifth years, his progress is checked periodically. The special class demonstration is useful for pupils who have unusual intellectual curiosity, who delight in learning, and who have unusual persistence and an awareness of their unique abilities. The focus is on problem solving in the areas of science, social science, and mathematics.

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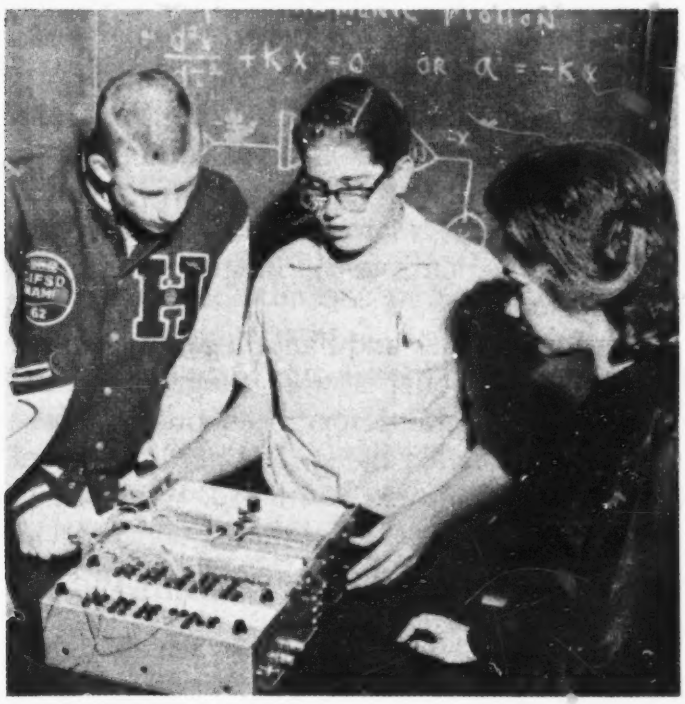
Recent Developments in Education for Gifted Pupils in California

By Paul D. Plowman and Joseph P. Rice, Jr.
Consultants in Education of the Mentally Gifted

Programs for gifted children are setting new standards for quality education in California and throughout the nation. Such programs focus upon individual learning needs, establish differential techniques, describe heightened goals of achievement, and emphasize personal development toward excellence. As a part of this process, myths, cliches, and prejudices concerning the nature and nurture of giftedness are being exposed and challenged. With increased sophistication, teachers and administrators are preparing for more professional and personally satisfying roles.

Educators have found that no single program can possibly meet the needs of all gifted children. Acceleration, special classes, and other means can work if such programs are well planned. Educators seem to be rediscovering that human beings are wonderfully varied and complex, and that delight can be experienced through intellectual pursuits.

Students in "honors physics" are using an analog computer for graphical solution of problems. Experiments such as this are conducted in San Diego City Unified School District.



Increased enrollment for gifted child programs was noted during the past fiscal year. During 1961-62, a total of 118 school districts offered special programs for 38,705 participating mentally gifted minors. During 1962-63, a total of 228 school districts having a total district enrollment of 2,430,955 pupils offered special educational programs for 68,237 mentally gifted minors. This represents a 76 percent increase in participation in one year. The 228 school districts offering special programs for mentally gifted minors enrolled approximately two-thirds of the total pupil population of California in kindergarten and grades one through twelve. These school districts placed 2.8 percent of their total enrollment in special educational programs for the gifted.

The most frequently used types of programs and the enrollment of each were:

- Enrichment in the regular classroom—35,526 pupils
- Special classes organized for gifted pupils—19,021 pupils
- Advanced classes including acceleration — 6,337 pupils
- Special counseling or instruction outside of the regular classroom—6,368 pupils

Courses by mail or special tutoring and programs involving high school pupils attending college classes were used only occasionally; 32 pupils were taking courses by mail or special tutoring and 440 high school pupils were attending college classes.

The types of programs currently offered for the gifted in the elementary schools differ from those offered in the high school. Approximately two-thirds of all elementary school gifted pupils are in programs involving enrichment of the regular curriculum. Acceleration, special counseling or instruction, and tutoring or courses by mail are used infrequently. Little acceleration of gifted pupils occurs during the first six years of school despite the profusion of literature which indicates that early acceleration may be

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beneficial. Special classes for gifted pupils seem to be gaining ground as the second most commonly used program for elementary school pupils, particularly in grades four, five, and six.

The most common program for gifted pupils at the secondary level is special classes organized for them. In secondary schools, approximately twice as many pupils are in special classes as are involved in enrichment programs. While acceleration and special counseling programs are more common in secondary schools, they still account for less than one-fourth of the gifted pupil enrollment.

In unified school districts, which appear to follow a middle course, enrichment programs are most common; however, special classes are a close second. Acceleration and special counseling programs are used more than is the case in either elementary or secondary school districts. More than two-thirds of all pupils in accelerated or special counseling programs were enrolled in unified school districts. The availability of more varied types of programs in unified school districts may be related to the availability of more professional consultants.

Recent experience of school districts indicates that educational programs for the gifted need to supplement and complement the regular program of the pupil. Any program for gifted pupils should involve consideration of these two dimensions:

- *Sequence.* The program must make provision for detailed planning of the child's total curriculum development. The program must assess the child's previous educational experience. Likewise, his current program must be planned and articulated with proposed curriculum development in the future.
- *Scope.*—All pupils require factual knowledge, logical methodology and certain kinds of enrichment at their given grade level. A gifted pupil is no exception. In fact, he should be encouraged to probe, critically analyze, subject to scrutiny, and explore in considerable depth all aspects of the curriculum. The gifted pupil will seek the security of scholarly methodology earlier than other pupils. He will require materials chosen from the world's great literature and the methodologies of science earlier in his school career than will other students.

No matter what the program is called, it needs to involve consideration of the dimensions of sequence and scope. A program labeled "enrichment" cannot fail to consider materials far more advanced than those traditionally offered at a given grade level. On the other hand, even though a program is labeled "acceleration," it cannot avoid the treatment of curriculum areas for the pupil in scope and depth.

Quality enrichment programs are as difficult to organize as any other type of program. The Fullerton Elementary School District has released a consultant to design sequential enrichment materials for their district. Subject matter oriented classroom "kits" were built by studying firsthand the needs of gifted pupils in the regular classroom. The enrichment study kits were articulated grade level to grade level, and vertical sequence was considered within a given subject matter. These "kits" can be used imaginatively in the regular classroom because they were developed on sound principles of curriculum development.

The Los Angeles and San Diego city unified school districts offer a wide range of special educational programs for gifted pupils. These districts have noted the special needs of gifted pupils with IQs in excess of 150. While acceleration may help certain of these pupils, special classes have been most effective in meeting their unusual needs.

Mathematical subject matter which differs qualitatively from that ordinarily offered in the

Individual study materials are being used in an acceleration program in the Cypress Elementary School District.

elementary school has been developed by Patrick Suppes of Stanford University. Among other districts, the Lompoc Unified and Millbrae Elementary school districts are using such courses as "mathematical logic" in the elementary school.

Many differing types of programs are being offered for secondary students. Advanced seminars in the humanities enable gifted high school seniors to wrestle with such ideas as these:

- Any man's death diminishes me, because I am involved in all mankind.—John Donne
- If you would judge—understand.—Plato

Early college admission is possible for a number of students from Beverly Hills High School and many other high schools in Los Angeles County. In Santa Monica, school officials have teamed up with industry in developing computer mathematics courses for seventh and eighth graders. Following a summer course, these students have an opportunity to program such computers as the LGP-30, IBM 1620, or the Data Control 160. This district is currently looking for a "surplus" computer for permanent installation and use.

In summary, educational opportunities for the gifted pupil in California schools are varied. While enrichment of the regular classroom program is currently the most common program type, other more complex and sophisticated programs are in process of development.

California Project Talent

The Office of Education, U. S. Department of Health, Education and Welfare, is currently supporting demonstration projects in California and Illinois in the area of talent development. Four types of educational programs for gifted pupils will be demonstrated in California this year and during the next two years. Model programs are being designed and demonstrated in the areas of enrichment, acceleration, counseling, and special classes.

The authors of this article are codirectors of this project. Working with them are these four Education Research Project consultants:

Mary Broderick, Consultant for the Enrichment Demonstration, Los Angeles Unified School District; Mrs. Vivian Sherman, Consultant for Special Classes and Acceleration, Ravenswood City Elementary School District and the Davis Joint Unified School District; Cecil Levin, Consultant for Special Class and Acceleration Demonstrations, Pasadena City and Lompoc unified school districts; and Louise Bachtold, Consultant for the Counseling Demonstration, San Juan Unified School District.

An aquarium for sea plants and animals is being developed by boys in Reed Union Elementary School District. Photo by Bill Steele.

All four programs are predicated upon a belief in individual differences. Therefore, the development of adequate case study techniques will form the foundation for curriculum planning and development. While each of the four programs may have particular appeal to districts with specialized philosophies of education at the outset, an attempt will be made to integrate these programs into a master plan for the total education of gifted pupils. Experience has indicated that no one kind of program can meet all of the complex needs of such a diverse group of pupils.

Enrichment Demonstration.—In Los Angeles, eight teachers are working with the consultant to develop materials and methods for teaching scientific investigation, critical appreciation, and creative expression in the elementary schools. Daily lesson plans and course outlines are to be based on the nature of the mental abilities of intellectually gifted children. This

Educational growth of eighth grade pupils is fostered through group counseling.

enrichment plan will prescribe the development of three courses designed to introduce elementary school children to the methodologies of science, art, and expression. Individual pupil projects will be designed to create opportunities for individual research.

The course in scientific methodology will include subject matter and examples from the fields of social science, natural science, and mathematics. Evaluation of the program will be based upon the progress noted in critical thinking, accuracy of observation and reporting, and the pupil's ability to apply scientific methodology in new situations.

The course in critical appreciation will utilize materials and examples from the nonverbal arts including the fine arts and music. Evaluation will be based upon pupil growth in knowledge of cultural development, development in aesthetic judgment, development of intellectual sensitivity to the arts, and tolerance for varied art forms.

The course in creative expression will be designed to foster creative writing, and it will utilize materials from the language arts. The pupil will be expected to develop proficiency in unique style and manner of writing.

Acceleration Demonstration.—A unique form of acceleration called the "Individual Placement Project" has been tried at the Pasadena City and Ravenswood City Elementary school districts during the summer of 1963. Other school districts in California having summer school acceleration programs in 1963 included the Fresno City Unified, Arcata Elementary, Reed Union Elementary, Cypress Elementary, and McKinleyville Union Elementary school districts.

This program offers acceleration without grade skipping. The pupil is selected during the second grade. He is chosen on the basis of his general maturity including personality development, interest patterns, intellectual attainment, achievement, and social awareness. The second grade teacher is encouraged to emphasize all skills usually mastered by third grade pupils. On completion of the second grade and a summer session of carefully guided curriculum experiences, pupils will enter school the following fall at fourth grade. During the six-week, full-time summer school, he receives an enriched third grade program in science, social studies, and work in skills of reading, mathematics, and cursive writing as necessary in terms of the individual child's proficiency. During his subsequent experiences in the fourth grade, his progress is checked periodically. Opportunities for special tutoring or counseling are available.

This type of program seems especially suited for pupils with a strong drive for academic achievement or those who may find the normal work pace to be too slow or the content depth too shallow.

Currently available special materials were found to be useful for this kind of program. Existing laboratories in reading, spelling, graph and picture study skills, and science were used. Encyclopedias, special reference books, and programmed instruction in reading and elementary science were also useful.

During the summer of 1963, data were gathered describing the academic achievement, intelligence, interest patterns, personality changes,

social development, and indices of satisfaction for participating pupils. Significant growth was found in all areas measured. Pupils extended their already advanced achievement level by one and one-half grade levels following the summer programs. School districts are invited to consider this type of program for next summer and to submit inquiries.

Special Class Demonstration.—Special classes have been organized in the Davis Joint and Lompoc unified school districts for grades four, five, and six. Techniques and subject matter specifically designed for gifted children are being sought and developed. This type of program seems to be useful for pupils with unusual intellectual curiosity, who delight in learning, who have a long attention span, who have sophisticated interest patterns, unusual persistence, and an awareness of their unique abilities.

Pupils will acquire direct experiences and experiences in problem solving in the areas of science, social science, and mathematics. Teachers will encourage and nurture divergent thinking and evaluative ability. Pupils will be stimulated to inquire and to entertain their own hypotheses. Special plans for a study will be designed to enhance the process of generalization. By means of independent inquiry into new problems, it is hoped that the pupils will raise their capabilities for discovery and research.

Hopefully, pupils will gain an understanding of themselves and others by way of the scientific procedures taught. Pupils will examine individual differences in such skills as working with spatial relations, verbal fluency, motor coordination, memory, scholastic aptitude, and ability to abstract. Through these appraisals, children will gain insight into how learning takes place. They may discover that the process of learning varies from individual to individual.

The special class situation may prove to be a most exciting frontier of education. Literally, the best techniques, content area developments, and study habits can be fostered in this specialized setting.

Counseling-Instructional Demonstration.—The counseling-instructional demonstration has been designed for the gifted secondary student beginning in grade seven. Group counseling will be coordinated with and will reinforce curriculum development and feedback in the language

Creative expression may enrich the lives of gifted children.

arts and social science classes. In the group counseling setting, perplexing and controversial problems of an intellectual nature arising in the classroom may be discussed openly and freely with one's intellectual peers. Such discussions will form the basis for feedback to teachers who in turn may want to revise the content or sequence of subject matter to coincide with the student's intellectual and guidance needs.

Counselors will meet with small groups of pupils every other week. Topics of intellectual concern stemming from the classroom, exploration of differing value orientations, and other pertinent topics will be discussed. On alternate weeks, counselors and teachers will meet to discuss the implications of the sessions for lesson planning, particularly in the English and social science disciplines. Counselors will promote

Children in Ravenswood City Elementary School District find that books tell them much about the world. Photos on this page by Ken Yimm, Palo Alto Times.

Preparing a weekly periodical for parents is an activity of the acceleration program at Reed Union Elementary School District.

critical and creative thinking by introducing related content into the discussions.

The counseling-instructional demonstration is designed to meet educational and guidance needs of individual students and to promote more effective learning in social science and English in grades seven through nine.

Demonstration Center Outcomes.—Demonstration centers will be ready for visitation after April 1, 1964. Descriptions of administrative procedures, teaching guides, related pupil materials, and suggested evaluation techniques for each type of program are being prepared. These items will undergo continuing refinement and reevaluation throughout the three-year demonstration project. However, they will be available in tentative form upon request early this year.

Certain demonstrations may proceed at a faster rate than others. For example, tentative materials describing the summer school acceleration program are already available.

The main purpose for the demonstration project is to develop and refine "exportable" model programs for use by school districts throughout California. Some consultant services will be available in 1964 to school districts interested in establishing these programs. Inquiries concerning any of the programs are invited.

California schools have witnessed a tremendous growth in the development of programs for mentally gifted pupils in the past two years. Every attempt is being made to develop curriculum which respects sequence and considers scope and depth. The positive benefits accruing to California schools cannot be measured at this time. Nevertheless, it is believed that as a result of these programs, new models of excellence will emerge.

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